IN THE CLAIMS:

Please AMEND the claims as indicated below:

1. (CURRENTLY AMENDED) A selected-wavelength tuning apparatus, comprising:

an acoustic optical tunable filter (AOTF) for rotating polarization in accordance with a radio-frequency signal and for branching wavelength division multiplexed light into selected-wavelength light and light with other wavelengths in accordance with the radio-frequency signal;

a radio-frequency signal generating means for generating said radio-frequency signal;

a light intensity detecting means for detecting light from said acoustic optical tunable filter; and

a radio-frequency signal controlling means for controlling said radio-frequency signal generating means so as to select light of a predetermined wavelength in accordance with an output of said light intensity detecting means.

2. (ORIGINAL) The selected-wavelength tuning apparatus according to claim 1, wherein

said radio-frequency signal controlling means comprises

a maximum value discriminating means for discriminating the maximum value of said light intensity with respect to an optical signal of a predetermined wavelength by receiving said light intensity from said light intensity detecting means while changing the frequency of said radio-frequency signal generated by said radio-frequency signal generating means; and

a frequency controlling means for controlling said radio-frequency signal generating means so as to generate the radio-frequency with the frequency which makes the maximum light intensity discriminated by said maximum value discriminating means.

3. (ORIGINAL) The selected-wavelength tuning apparatus according to claim 2, wherein

said frequency controlling means generates a frequency which is smaller than the frequency of said radio-frequency signal supplied from said radio-frequency signal generating means and

said radio-frequency signal generating means superimposes said frequency of

said frequency controlling means with said radio-frequency signal.

4. (ORIGINAL) The selected-wavelength tuning apparatus according to claim 2, wherein said frequency controlling means controls the frequency of said radio-frequency signal so that the light intensity of said optical signal of specific wavelength is maximized every time said optical signal of specific wavelength is changed.

5. (ORIGINAL) The selected-wavelength tuning apparatus according to claim 1, wherein

said radio-frequency signal controlling means, further comprises

a reference signal adding means for adding a reference signal whose wavelength is known to the optical input side of said AOTF and

said radio-frequency signal controlling means for detecting said reference signal from the output of said light intensity detecting means and computing the relationship between the selected-wavelength of said AOTF and the radio-frequency based on the detecting result.

6. (ORIGINAL) The selected-wavelength tuning apparatus according to claim 5, wherein the wavelength of said reference signal is the wavelength at the edge of the wavelength band for transmitting said optical signal.

7. (ORIGINAL) The selected-wavelength tuning apparatus according to claim 1, wherein

said light intensity detecting means is an optical spectrum analyzer for further detecting said light wavelength and

said radio-frequency signal controlling means generates the radio-frequency signal with a known frequency and computes the relationship between the selected-wavelength of said AOTF and the radio-frequency based on the output of said optical spectrum analyzer.

8. (ORIGINAL) The selected-wavelength tuning apparatus according to claim 7, further comprising an optical amplifier connected to the optical input side of said AOTF.

9. (ORIGINAL) The selected-wavelength tuning apparatus according to claim 1, comprising

a plurality of said acoustic optical tunable filters are formed on the same single

substrate and

temperature controlling means for controlling temperature of the plurality of said acoustic optical tunable filters to be the same.

10. (ORIGINAL) The selected-wavelength tuning apparatus according to claim 1, wherein

said radio-frequency signal controlling means comprises

intensity maximum value discriminating means for discriminating the maximum value of said light intensity with respect to an optical signal of predetermined wavelength by receiving said light intensity from said light intensity detecting means while changing the intensity of said radio-frequency signal generated by said radio-frequency signal generating means and

intensity controlling means for controlling said radio-frequency signal generating means so that it generates the radio-frequency signal having the intensity which sets the light intensity discriminated by said intensity maximum value discriminating means at the maximum.

11. (ORIGINAL) The selected-wavelength tuning apparatus according to claim 1, comprising

superimposing means for superimposing a low-frequency signal to said radio-frequency signal and

tracking means for controlling said radio-frequency signal generating means so as to maintain the light intensity of the optical signal of said predetermined wavelength at the maximum by detecting said low-frequency signal from the optical signal exited from said AOTF.

12. (ORIGINAL) The selected-wavelength tuning apparatus according to claim 11, a selected-wavelength tuning filter wherein

a light entered to said AOTF is a wavelength-division multiplexed optical signal and

said tracking means controls said radio-frequency signal generating means within a range of radio-frequency corresponding to the distance of said wavelength-division multiplexed optical signal.

13. (WITHDRAWN) AOTF which outputs an optical signal of specific wavelength in accordance with a frequency of said first radio-frequency signal and a frequency of said second radio-frequency signal as a first output, and outputs light with other wavelengths as a second

output, comprising:

first polarizing means for branching an optical input into TM and TE mode lights;

first radio-frequency signal applying means for applying first radio-frequency signal to a first optical waveguide for propagating the TM mode light branched by said first polarizing means;

second radio-frequency signal applying means for applying second radio-frequency signal to a second optical waveguide for propagating the TE mode light branched by said first polarizing means; and

second polarizing means for multiplexing optical signals from said first optical waveguides to which said first radio-frequency signal has been applied and said second optical waveguides to which said second radio-frequency signal has been applied, and branching them as first and second outputs corresponding to a state of polarization of the light.

14. (CURRENTLY AMENDED) A selected-wavelength tuning apparatus, comprising:

AOTF which comprises first polarizing means for branching ~~an~~ a wavelength division multiplexed optical input into TM and TE mode lights,

first radio-frequency signal applying means for applying first radio-frequency signal to a first optical waveguide which is for propagating the TM mode light branched by said first polarizing means,

second radio-frequency signal applying means for applying second radio-frequency signal to a second optical waveguide for propagating the TE mode light branched by said first polarizing means, and

second polarizing means for multiplexing optical signals from said first optical waveguides to which said first radio-frequency signal has been applied and said second optical waveguides to which said second radio-frequency signal has been applied, and branching them as first and second outputs corresponding to a state of polarization of the light;

radio-frequency signal generating means for generating said radio-frequency signal;

light intensity detecting means for detecting the intensity of light from said AOTF; and

radio-frequency signal control means for controlling said radio-frequency generating means so as to select light of a predetermined wavelength in accordance with the output of said light intensity detecting means.

15. (ORIGINAL) The selected-wavelength tuning apparatus according to claim 14, wherein

said radio-frequency signal applying means are two radio-frequency signal applying means, of which the first radio-frequency signal applying means applies the radio-frequency signal to the TM mode light branched by said first polarizing means and the second radio-frequency signal applying means applies the radio-frequency signal to the TE mode light branched by said first polarizing means and

said radio-frequency signal generating means supplies the radio-frequency signals of different frequencies to said first and second radio-frequency signal applying means.

16. (ORIGINAL) The selected-wavelength tuning apparatus according to claim 14, further comprising third polarizing means for branching the lights exited from said first output into TM mode and TE mode lights, and wherein

said light intensity detecting means comprises a first light intensity detecting means for detecting the light intensity of TM mode light exited from said third polarizing means and a second light intensity detecting means for detecting the light intensity of TE mode light exited from said third polarizing means.

17. (CURRENTLY AMENDED) A selected-wavelength tuning apparatus, comprising

AOTF for rotating polarization in accordance with a radio-frequency signal and for branching wavelength division multiplexed light into selected-wavelength light and light with other wavelengths in accordance with the radio-frequency signal and

a plurality of radio-frequency signal generating means for generating said radio-frequency signals.

18. (CURRENTLY AMENDED) An optical add/drop multiplexer for adding and dropping optical signals from wavelength-division multiplexed optical signals, comprising a selected-wavelength tuning apparatus which comprises:

an AOTF for rotating polarization in accordance with a radio-frequency signal and for branching wavelength division multiplexed light into selected-wavelength light and light with other wavelengths in accordance with the radio-frequency signal;

radio-frequency signal generating means for generating said radio-frequency signal;

light intensity detecting means for detecting the intensity of light from said AOTF;

and

radio-frequency signal controlling means for controlling said radio-frequency signal generating means so as to select light of a predetermined wavelength in accordance with the output of said light intensity detecting means.

19. (ORIGINAL) The optical add/drop multiplexer according to claim 18, in which a plurality of acoustic optical tunable filters are connected in tandem.

20. (CURRENTLY AMENDED) An optical spectrum analyzer, comprising:

AOTF for rotating polarization in accordance with a radio-frequency signal and for branching wavelength division multiplexed light into selected-wavelength light and light with other wavelengths in accordance with the radio-frequency signal;

light intensity detecting means for detecting the intensity of the light from said AOTF;

radio-frequency signal controlling means for controlling said radio-frequency signal generating means so as to select light of a predetermined wavelength in accordance with the output of said light intensity detecting means; and

storage means for storing the frequencies of said radio-frequency signal that changes and light intensity detected by said light intensity detecting means with respect to the frequency.

21. (ORIGINAL) The optical spectrum analyzer according to claim 20, further comprising rejecting means for rejecting the light exited from said AOTF.

22. (CURRENTLY AMENDED) An optical add/drop multiplexer for adding and dropping optical signals from wavelength-division multiplexed optical signals, comprising a spectrum analyzer which comprises:

AOTF for rotating polarization in accordance with a radio-frequency signal and for branching wavelength division multiplexed light into selected-wavelength light and light with other wavelengths in accordance with the radio-frequency signal;

radio-frequency signal generating means for generating said radio-frequency signal;

light intensity detecting means for detecting the intensity of light from said AOTF;

radio-frequency signal controlling means for controlling said radio-frequency

signal generating means so as to select light of a predetermined wavelength in accordance with the output of said light intensity detecting means; and

storage means for storing the frequencies of said radio-frequency signal that changes and light intensity detected by said light intensity detecting means with respect to the frequency.

23. (CURRENTLY AMENDED) A selected-wavelength tuning apparatus, comprising:

an acoustic optical tunable filter (AOTF) branching wavelength division multiplexed light into selected-wavelength light and light with other wavelengths in accordance with a radio-frequency signal;

a radio-frequency signal generating unit generating said radio-frequency signal;

a light intensity detecting unit detecting light from said acoustic optical tunable filter; and

a radio-frequency signal controlling unit controlling said radio-frequency signal generating unit so as to select light of a predetermined wavelength in accordance with an output of said light intensity detecting unit.

24. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus according to claim 23, wherein

said radio-frequency signal controlling unit comprises

a maximum value discriminating unit discriminating the maximum value of said light intensity with respect to an optical signal of a predetermined wavelength by receiving said light intensity from said light intensity detecting unit while changing the frequency of said radio-frequency signal generated by said radio-frequency signal generating unit; and

a frequency controlling unit controlling said radio-frequency signal generating unit so as to generate the radio-frequency with the frequency which makes the maximum light intensity discriminated by said maximum value discriminating unit.

25. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus according to claim 24, wherein

said frequency controlling unit generates a frequency which is smaller than the frequency of said radio-frequency signal supplied from said radio-frequency signal generating unit and

said radio-frequency signal generating unit superimposes said frequency of said

frequency controlling unit with said radio-frequency signal.

26. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus according to claim 24, wherein said frequency controlling unit controls the frequency of said radio-frequency signal so that the light intensity of said optical signal of specific wavelength is maximized every time said optical signal of specific wavelength is changed.

27. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus according to claim 23, wherein

said radio-frequency signal controlling unit, further comprises

a reference signal adding unit adding a reference signal whose wavelength is known to the optical input side of said AOTF and

said radio-frequency signal controlling unit detecting said reference signal from the output of said light intensity detecting unit and computing the relationship between the selected-wavelength of said AOTF and the radio-frequency based on the detecting result.

28. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus according to claim 27, wherein the wavelength of said reference signal is the wavelength at the edge of the wavelength band transmitting said optical signal.

29. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus according to claim 23, wherein

said light intensity detecting unit is an optical spectrum analyzer further detecting said light wavelength and

said radio-frequency signal controlling unit generates the radio-frequency signal with a known frequency and computes the relationship between the selected-wavelength of said AOTF and the radio-frequency based on the output of said optical spectrum analyzer.

30. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus according to claim 29, further comprising an optical amplifier connected to the optical input side of said AOTF.

31. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus according to claim 23, comprising:

a plurality of said acoustic optical tunable filters formed on the same single substrate and

a temperature controlling unit controlling temperature of the plurality of said acoustic optical tunable filters to be the same.

32. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus according to claim 23, wherein

said radio-frequency signal controlling unit comprises

an intensity maximum value discriminating unit discriminating the maximum value of said light intensity with respect to an optical signal of predetermined wavelength by receiving said light intensity from said light intensity detecting unit while changing the intensity of said radio-frequency signal generated by said radio-frequency signal generating unit and

an intensity controlling unit controlling said radio-frequency signal generating unit so that it generates the radio-frequency signal having the intensity which sets the light intensity discriminated by said intensity maximum value discriminating unit at the maximum.

33. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus according to claim 23, comprising

a superimposing unit superimposing a low-frequency signal to said radio-frequency signal and

a tracking unit controlling said radio-frequency signal generating unit maintaining the light intensity of the optical signal of said predetermined wavelength at the maximum by detecting said low-frequency signal from the optical signal exited from said AOTF.

34. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus according to claim 33, further comprising a selected-wavelength tuning filter wherein

a light entered to said AOTF is a wavelength-division multiplexed optical signal and

said tracking unit controls said radio-frequency signal generating unit within a range of radio-frequency corresponding to the distance of said wavelength-division multiplexed optical signal.

35. (WITHDRAWN) AOTF which outputs an optical signal of specific wavelength in accordance with a frequency of said first radio-frequency signal and a frequency of said second

radio-frequency signal as a first output, and outputs light with other wavelengths as a second output, comprising:

a first polarizing unit branching an optical input into TM and TE mode lights;

a first radio-frequency signal applying unit applying first radio-frequency signal to a first optical waveguide propagating the TM mode light branched by said first polarizing unit;

a second radio-frequency signal applying unit applying second radio-frequency signal to a second optical waveguide propagating the TE mode light branched by said first polarizing means; and

a second polarizing unit multiplexing optical signals from said first optical waveguides to which said first radio-frequency signal has been applied and said second optical waveguides to which said second radio-frequency signal has been applied, and branching them as first and second outputs corresponding to a state of polarization of the light.

36. (CURRENTLY AMENDED) A selected-wavelength tuning apparatus, comprising:

an AOTF which comprises a first polarizing unit branching ~~an~~ a wavelength division multiplexed optical input into TM and TE mode lights,

a first radio-frequency signal applying unit applying first radio-frequency signal to a first optical waveguide which is propagating the TM mode light branched by said first polarizing unit,

a second radio-frequency signal applying unit applying second radio-frequency signal to a second optical waveguide propagating the TE mode light branched by said first polarizing unit, and

a second polarizing unit multiplexing optical signals from said first optical waveguides to which said first radio-frequency signal has been applied and said second optical waveguides to which said second radio-frequency signal has been applied, and branching them as first and second outputs corresponding to a state of polarization of the light;

a radio-frequency signal generating unit generating said radio-frequency signal;

a light intensity detecting unit detecting the intensity of light from said AOTF; and

a radio-frequency signal control unit controlling said radio-frequency generating unit so as to select light of a predetermined wavelength in accordance with the output of said light intensity detecting unit.

37. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus according to claim 36, wherein

said radio-frequency signal applying unit includes two radio-frequency signal applying units, of which the first radio-frequency signal applying unit applies the radio-frequency signal to the TM mode light branched by said first polarizing unit and the second radio-frequency signal applying unit applies the radio-frequency signal to the TE mode light branched by said first polarizing unit and

said radio-frequency signal generating unit supplies the radio-frequency signals of different frequencies to said first and second radio-frequency signal applying unit.

38. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus according to claim 36, further comprising a third polarizing unit branching the lights exited from said first output into TM mode and TE mode lights, and wherein

said light intensity detecting unit comprises a first light intensity detecting unit detecting the light intensity of TM mode light exited from said third polarizing unit and a second light intensity detecting unit detecting the light intensity of TE mode light exited from said third polarizing unit.

39. (CURRENTLY AMENDED) A selected-wavelength tuning apparatus, comprising

an AOTF rotating polarization in accordance with a radio-frequency signal and branching wavelength division multiplexed light into selected-wavelength light and light with other wavelengths in accordance with the radio-frequency signal and

a plurality of radio-frequency signal generating unit generating said radio-frequency signals.

40. (CURRENTLY AMENDED) An optical add/drop multiplexer adding and dropping optical signals from wavelength-division multiplexed optical signals, comprising a selected-wavelength tuning apparatus which comprises:

an AOTF branching wavelength division multiplexed light into selected-wavelength light and light with other wavelengths in accordance with a radio-frequency signal;

a radio-frequency signal generating unit generating said radio-frequency signal;

a light intensity detecting unit detecting the intensity of light from said AOTF; and

a radio-frequency signal controlling unit controlling said radio-frequency signal generating unit selecting light of a predetermined wavelength in accordance with the output of said light intensity detecting unit.

41. (PREVIOUSLY PRESENTED) The optical add/drop multiplexer according to claim 40, in which a plurality of acoustic optical tunable filters are connected in tandem.

42. (CURRENTLY AMENDED) An optical spectrum analyzer, comprising:

an AOTF rotating polarization in accordance with a radio-frequency signal and branching wavelength division multiplexed light into selected-wavelength light and light with other wavelengths in accordance with the radio-frequency signal;

a light intensity detecting unit detecting the intensity of the light from said AOTF;

a radio-frequency signal controlling unit controlling said radio-frequency signal generating unit selecting light of a predetermined wavelength in accordance with the output of said light intensity detecting unit; and

a storage unit storing the frequencies of said radio-frequency signal that changes and light intensity detected by said light intensity detecting unit with respect to the frequency.

43. (PREVIOUSLY PRESENTED) The optical spectrum analyzer according to claim 42, further comprising a rejecting unit rejecting the light exited from said AOTF.

44. (CURRENTLY AMENDED) An optical add/drop multiplexer adding and dropping optical signals from wavelength-division multiplexed optical signals, comprising a spectrum analyzer which comprises:

an AOTF receiving an optical signal and in accordance with a radio-frequency (RF) signal applied to the AOTF, branching wavelength division multiplexed light into selected-wavelength light and light with other wavelengths in accordance with the radio-frequency signal;

a radio-frequency signal generating unit generating said radio-frequency signal;

a light intensity detecting unit detecting the intensity of light from said AOTF;

a radio-frequency signal controlling unit controlling said radio-frequency signal generating unit so as to select light of a predetermined wavelength in accordance with the output of said light intensity detecting unit; and

a storage unit storing the frequencies of said radio-frequency signal that changes and light intensity detected by said light intensity detecting unit with respect to the frequency.

45. (PREVIOUSLY PRESENTED) An apparatus comprising:

an acoustic optical tunable filter (AOTF) receiving a wavelength division multiplexed (WDM) light and, in accordance with a radio frequency (RF) signal applied to the

AOTF, outputting first and second lights, the first light including at least one wavelength of the WDM light selected in accordance with the applied RF signal, and the second light including wavelengths of the WDM light other than the selected at least one wavelength; and

a controller controlling the applied RF signal so that the selected at least one wavelength is selected in accordance with a detected intensity of the first light.

46. (PREVIOUSLY PRESENTED) An apparatus comprising:

an acoustic optical tunable filter (AOTF) receiving a wavelength division multiplexed (WDM) light and, in accordance with a radio frequency (RF) signal applied to the AOTF, outputting first and second lights, the first light including at least one wavelength of the WDM light selected in accordance with the applied RF signal, and the second light including wavelengths of the WDM light other than the selected at least one wavelength; and

means for controlling the applied RF signal so that the selected at least one wavelength is selected in accordance with a detected intensity of the first light.

47. (CURRENTLY AMENDED) A selected-wavelength tuning apparatus, comprising:

an acoustic optical tunable filter (AOTF), branching wavelength division multiplexed light into selected-wavelength light including at least one wavelength of light selected in accordance with a radio-frequency signal, and light with other wavelengths in accordance with the radio-frequency signal;

a radio-frequency signal generating unit generating said radio-frequency signal;

a light intensity detecting unit detecting the selected-wavelength light from said acoustic optical tunable filter; and

a radio-frequency signal controlling unit controlling said radio-frequency signal generating unit so as that the selected at least one wavelength of light is selected in accordance with an output of said light intensity detecting unit.

48. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus according to claim 1, wherein said radio-frequency signal controlling means controls said radio-frequency signal generating means so as to select light of a predetermined wavelength in accordance with the output of said light intensity detecting means to thereby compensate for shifts in the selected wavelengths due to temperature changes.

49. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus

according to claim 14, wherein said radio-frequency signal controlling means controls said radio-frequency signal generating means so as to select light of a predetermined wavelength in accordance with the output of said light intensity detecting means to thereby compensate for shifts in the selected wavelengths due to temperature changes.

50. (PREVIOUSLY PRESENTED) The optical add/drop multiplexer according to claim 18, wherein said radio-frequency signal controlling means controls said radio-frequency signal generating means so as to select light of a predetermined wavelength in accordance with the output of said light intensity detecting means to thereby compensate for shifts in the selected wavelengths due to temperature changes.

51. (PREVIOUSLY PRESENTED) The optical spectrum analyzer according to claim 20, wherein said radio-frequency signal controlling means controls said radio-frequency signal generating means so as to select light of a predetermined wavelength in accordance with the output of said light intensity detecting means to thereby compensate for shifts in the selected wavelengths due to temperature changes.

52. (PREVIOUSLY PRESENTED) The optical add/drop multiplexer according to claim 22, wherein said radio-frequency signal controlling means controls said radio-frequency signal generating means so as to select light of a predetermined wavelength in accordance with the output of said light intensity detecting means to thereby compensate for shifts in the selected wavelengths due to temperature changes.

53. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus according to claim 23, wherein said radio-frequency signal controlling unit controls said radio-frequency signal generating unit so as to select light of a predetermined wavelength in accordance with the output of said light intensity detecting unit to thereby compensate for shifts in the selected wavelengths due to temperature changes.

54. (PREVIOUSLY PRESENTED) The selected-wavelength tuning apparatus

according to claim 36, wherein said radio-frequency signal control unit controls said radio-frequency signal generating unit so as to select light of a predetermined wavelength in accordance with the output of said light intensity detecting unit to thereby compensate for shifts in the selected wavelengths due to temperature changes.

55. (PREVIOUSLY PRESENTED) The optical add/drop multiplexer according to claim 40, wherein said radio-frequency signal controlling unit controls said radio-frequency signal generating unit selecting light of a predetermined wavelength in accordance with the output of said light intensity detecting unit to thereby compensate for shifts in the selected wavelengths due to temperature changes.

56. (PREVIOUSLY PRESENTED) The optical spectrum analyzer according to claim 42, wherein said radio-frequency signal controlling unit controls said radio-frequency signal generating unit selecting light of a predetermined wavelength in accordance with the output of said light intensity detecting unit to thereby compensate for shifts in the selected wavelengths due to temperature changes.

57. (PREVIOUSLY PRESENTED) The optical add/drop multiplexer according to claim 44, wherein said radio-frequency signal controlling unit controls said radio-frequency signal generating unit so as to select light of a predetermined wavelength in accordance with the output of said light intensity detecting unit to thereby compensate for shifts in the selected wavelengths due to temperature changes.

58. (PREVIOUSLY PRESENTED) The apparatus according to claim 45, wherein said controller controls the applied RF signal so that the selected at least one wavelength is selected in accordance with a detected intensity of the first light to thereby compensate for shifts in the selected wavelengths due to temperature changes.

59. (PREVIOUSLY PRESENTED) The apparatus according to claim 46, wherein said means for controlling controls the applied RF signal so that the selected at least one wavelength is selected in accordance with a detected intensity of the first light to thereby compensate for

shifts in the selected wavelengths due to temperature changes.

60. (PREVIOUSLY PRESENTED) The apparatus according to claim 47, wherein said radio-frequency signal controlling unit controls the radio-frequency signal generating unit so as that the selected at least one wavelength is selected in accordance with an output of said light intensity detecting unit to thereby compensate for shifts in the selected wavelengths due to temperature changes.